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# THE SCHOOL REVIEW

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## THE PRACTICAL VALUE OF HUMANISTIC STUDIES<sup>1</sup>

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Two characteristics mark the attitude of our day toward educational matters, the first a widely diffused interest in such things in general, the second a great scepticism with regard to the value of this and that in detail. The springing up of new universities, the multiplying of teachers' associations, the establishment of new journals for teachers, are among the evidences of the first of these characteristics. Of the second, no evidence is needed. The air is full of slurs upon one and another phase of collegiate or high-school study. They come from every quarter. If you will watch the daily papers at commencement time, you will see that few of our commencement orators, if imported from the outside, fail to point out, somewhere in the tide of their eloquence, that the ardent young graduate is about to plunge into a cold world in which book-learning does not count. If the orator neglects this fertile theme, the editorial writer of the local paper is likely to repair the omission the next morning, and to insist that young men ought nowadays to be so trained that, when they get out of school or out of college, they can make a living. And if these gentlemen single out any particular kind of studies as exhibiting the perfection of inapplicability and uselessness, it is likely to be

<sup>1</sup> This paper was prepared, many years ago, for the writer's students at Cornell University. It has been read, since then, before a number of associations, the last of which was the Michigan Schoolmasters' Club, at the request of whose officers it is now published.

the most distinctive of the humanistic studies—the once enthroned Greek and Latin.

One finds it, of course, natural that, in this general questioning, the things which have been pre-eminent in the past should be subjected to the fiercest examination, and not surprising that, under the well-known behavior of human thought, the presumption should seem to be against them, rather than for them. That which has been, has had its day—such is the easy conclusion of the unregenerate human mind. That which, in the cases that arrest our attention, does not work, is bad—such is the equally easy conclusion of the human mind at a stage of partial illumination. No kind of proof is more dangerous. The question has always to be asked, Is the evidence fairly complete? Everyone knows of Bachelors of Arts who have not the art of making a living. But everyone knows of Bachelors of Arts who make a very good living indeed, and, on the other hand, everyone occasionally witnesses lamentable failures on the part of men who were fortunate enough to start in life unincumbered with Greek and Latin. The method of proof by the count of heads is an interesting one, and would be fruitful enough, if it could be carried far enough. If it could be shown, for example, that there is a clearly larger percentage of failure among men who have had the collegiate education than among those who have not, or among those who have had Greek and Latin than among those who have not, then something certainly ought to be done in the way of reform. So far as my own experience goes, the fact would seem to be the opposite. But such views are necessarily personal. Every man judges by the heads he happens to notice, with results to his own satisfaction. We must try a safer way, not a new one—there is none—but a good one. It consists merely in the patient examination of familiar ground, and, above all, of our points of view.

Let us, then, putting aside personal standards of opinion, and possible local standards of prejudice, start from the fundamental question, What is education, and how is it related to the college curriculum?

First, let us recognize distinctly that a college education does not work miracles. It is a good, but imperfect, means of developing an imperfect creature. At the end of it, a young man does not spring forth full-armed and capable, like Athena from the brain of Zeus; but he has won, or may have won, certain things. These things fall into five classes: first, the power of seeing that which is, and inferring from it that which must be; second, the power of expressing himself with correctness and force; third, a body of interesting and useful information; fourth, mental horizons—the intellectual background of the man's life; fifth, something still more precious, which I beg to be allowed to leave for the moment unstated. The first, the power of clear seeing and clear thinking, is the result of what is known as "discipline," and may be excellently obtained from humanistic studies. You see, and must wonder at, my courage. For a long time, no advocate of classical education has been safe from ridicule when he has urged the disciplinary value of the study of Greek and Latin. That claim is so old as to sound absurd. Curiously enough, exactly the same claim is made for their subjects by our friends and colleagues of the natural sciences, and, coming from this new quarter, is listened to with the respectful attention which it deserves. By and by, that too will be an old story, and then we shall have a fairer attitude toward the whole matter, and a recognition that whatsoever study, in itself not too easy, presents phenomena to be observed, and inferences to be drawn, affords so good a field for discipline, of one kind or another, that the question of the choice should turn rather on other considerations. Leaving this topic for the moment, then (I shall return to some aspects of it a little later), let us consider the remaining four—the acquisition of the power of expression, the acquisition of a body of information, the acquisition of an intellectual background, and the fifth, from which the curtain has not yet been drawn.

With regard to the acquisition of the power of expression, I fancy few words are necessary, so far as the ma-

jority of humanistic studies, those that deal with literature, are concerned. It is obvious that they are in their very nature fitted to develop this power, since a considerable part of the work in them is devoted to a study of the form of expression of the original, and a re-expression of the same ideas in the mother-tongue. The *importance*, likewise, of the acquiring of this power is universally conceded. It would be sufficient to refer to the position taken by the Leland Stanford Junior University, in the matter of a requirement in English. That university holds that one study is as good and as dignified as another, and that, in consequence, no study should be required, the choice of his course being left wholly to the student. With illuminating inconsistency, however, the University requires English of every student, both before and after entrance; and, since the aim of the Leland Stanford University is avowedly practical, we are bound to suppose that back of this requirement lies the conviction that the power of expression in the mother-tongue is of prime practical importance.

We come next to the matter of the body of interesting and useful information acquired in school or college. Before we take this up, however, we must draw a sharp line of demarcation, and be willing, in looking at prevailing systems, to spend a few minutes in seeing them in their historical place and connection.

There are two distinct kinds of education, corresponding to two distinct aims. There is, on the one hand, the education that aims to prepare the young man or young woman to do, with intelligent skill, certain things, more or less manual, through which a livelihood may be obtained—the so-called industrial education. The race among the nations of the civilized world turns, to a very important degree, upon the opportunities afforded to their young men of “practical” tastes, as the misleading phrase is, to learn, under skilled instruction, the things which in our country are mostly learned in the haphazard school of raw labor. Closely allied to this, but requiring a higher stage of intellectual development, and offering oppor-

tunities of brilliant careers to the most gifted, is the technical education, the outcome of our splendid material civilization, and the pledge of splendors yet to come. To this, also, I concede every claim but one. It is impossible to overrate the importance either of the industrial or of the technical training, so long as your method of urging that importance is not by asserting the uselessness of other things, belonging to a wholly different aim and wholly different kind of life.

At the opposite extreme from the industrial and technical lies the so-called liberal education. It arose, or rather arose a second time, in the Rebirth of Europe, which began some six centuries ago. At the root of it lay a growing sentiment, to which the name of Humanism came later to be given. The sentiment, the idea, are substantially the same today as then, and we shall clear our conceptions of education by seeing what the essential nature of this movement was.

The slender thread of intellectual life had been carried on from Roman times by the churchmen and expounders of the law; and, through the former in particular, the Latin classics had been preserved, while the ability to write a certain kind of Latin had all along been a necessity to both classes. Knowledge of the Greek tongue, however, had wholly disappeared from western Europe. I shall not attempt to trace the causes of the movement which led to the beginnings proper of the illumination. There was, of course, no sudden appearance in the world of something wholly lacking before. Nature does not work by leaps. But there was one man in whom the new spirit was so pre-eminently strong that he is beyond question the father of modern thought—the poet Petrarch.

Brought up to be a lawyer, Petrarch was trained in the Latin of his time, and his enforced taking of holy orders in his desire to lead a literary life doubtless was a still greater help to him in his study of Latin writers. This study was, of course, not due to the influence of any “college fetich,” to use a phrase made famous by Mr. Charles Francis Adams: it was the result of a serious passion. In his authors,

and especially in Cicero and Virgil, Petrarch found that which was food to his soul. A journey to Rome wrought upon him that indescribable spell which it has produced since upon a Goethe and a Winckelmann, and which it produces upon every traveler of today that carries a soul with him. A visionary and enthusiast, a lover of the wild and romantic in nature, Petrarch established himself some time later in the solitude of Vaucluse, where he led for four years a life of study, devoting himself to Roman literature and history, and preparing for his Latin epic poem *Africa*. The fame of his writings brought him the laurel crown at Rome, which he received upon the Capitol, with solemn ceremonies, in the year 1341. The oration which he delivered is notable in the history of the human spirit. His text was the words of Virgil, from the third Georgic, verses 291-92:

Sed me Parnassi deserta per ardua dulcis

Raptat amor:

"But, as for me, the sweet love of Parnassus  
bids me hasten on through steep and desert  
ways."

The ceremony was not new. Others before Petrarch had been similarly crowned, in other cities of Italy. But Rome, though she was now the seat of neither emperor nor pope, was still, in the imagination of men as in their memories, the mistress of the world. It was fitting that, upon the spot most solemnly associated with her ancient grandeurs, the man who was to evoke again the life of art and science should deliver his defense of letters, and summon men once more to the heights of Parnassus, so long deserted. Upon the Capitol at Rome, antiquity that day passed on its wealth to the emerging spirit of the modern world.

In the next year, Petrarch attempted the study of Greek, having for his teacher a Calabrian, long resident in Greece, the first of those Greek scholars who played so important a part in the new life. Petrarch began, as he himself tells us, with great alacrity, but the difficulty of an entirely strange tongue, and the early departure of his teacher, cut short his purpose. Yet he divined the value of Greek, and it was

partly through his encouragement that a younger friend and intimate, Boccaccio, prosecuted the study, and helped to make it possible for others to prosecute it. It is worth noting, as we pass, that our modern classical studies begin with the two first great names in *modern* literature. Classical education is not, as is so often said, descended from Mediaevalism. It is descended from the *revolt* against Mediaevalism.

The study of Greek did not get on very fast at the outset, and Petrarch says in one of his letters to dead authors, as we should call them, now that Andrew Lang has reinvented them—a letter addressed to Homer—that there were at that time not above ten persons in Italy who knew how to value the old father of the poets; five at the most in Florence, one in Bologna, two in Verona, one in Mantua, one in Perugia, but none at Rome. This seems a slow beginning; but in the fifteenth century, when the movement was fairly started, the Revival went on with marvelous rapidity. There was an ardent study of Greek and Latin, a hunting-up of manuscripts and a copying and disseminating of them, a writing of expositions, of grammars, of histories, of compilations of antiquities. Popes, princes, bankers aided the new activity. The lecture-rooms of the Italian universities were crowded with eager hearers. The spirit of a new crusade, a crusade of the intellect, had come upon the world. Then followed, with the invention of printing, the rapid multiplying of classical texts. The new activity spread to France, Germany, and England. The professors of rhetoric, as they were called, expounded, in crowded lecture-rooms, Greek and Roman grammar and philology, religion and customs, numismatics, philosophy, mythology, law, and institutions—the classical curriculum of today—with means of investigation imperfect as compared with ours, but with a zeal as great as would that ours were! This was some hundreds of years ago. We are doing the same now. Why should we occupy ourselves, in this busy new world, with the things that occupied men when the continent in which we live was unknown?

Another question must be asked and answered first. What



was the spirit that animated the Revival? For if that spirit is still the true one, then, no matter how old it may be, we should only be going astray from human nature by departing from it. It was the spirit which recognized the dignity and power of *man*—a conception vastly different from that which had obtained in the Middle Ages. Hence its name of *Humanism*. Unconscious at first what its mission of disintegration and reconstruction was to be, it exercised human judgment upon life. It looked with fresh interest upon this world. It read a great and hopeful lesson in that which humanity had accomplished in Greece and Rome before the coming of Christianity. It longed to become again creative, as antiquity had been creative in the still visible remains of art and literature.

The movement was not, mark you, an attempt to save the old, but the bursting forth of new life which found its food and inspiration in a great past. It threw off the burden of what was false in the religious and political conceptions of the Middle Ages. It was a revolt against asceticism, or the belief that God intends His children to be happy only in the hereafter. It was a revolt against mysticism, and in favor of rational inquiry. It went too far, like many another good impulse in the development of man, and in parts of Europe, especially in Italy itself, came near to return to the paganism on which it fed. But it was essentially sound; and out of it was born the Reformation, as truly a fruit of the Classical Revival as was the classical curriculum itself. Out of it, too, was born modern science. For the first break with mediaeval science came through the works of medicine, medical botany, and anatomy, translated and edited from Hippocrates, Galen, and Dioscorides by Italian, French, German, and English physicians.

To put the matter briefly, then, the humanistic spirit, first showing itself clearly in Petrarch, asserted the dignity of man, the interest of this world, and the right of free inquiry. And with these assertions went a passionate love of the highest products of the human spirit, namely, literature and art.

Then we are ready to say why we are occupying ourselves with the same things as these professors whose voices have been still these hundreds of years. It is because their animating purpose corresponds to an eternal fact. Man, and the records of his spirit, then constituted, and must forever constitute, the object of supremest interest to man. I do not mean that there are no other objects of interest. We are invested, as a race, with a boundless desire to understand the world in which we find ourselves. The habits of the ant, of the flower, of the bee, of chemical reagents, of moving forces, find men in abundance to study them with the zeal of investigators, and students in abundance to learn from these investigators. But the claim that any of these things, the ant, the bee, the chemical reagent, is a more worthy object of interest, or an actually more interesting object, than the human mind, is a preposterous one. I haven't a word of complaint for the man who, for himself, finds the ant-hill or the bee-hive a more attractive product of life than *Hamlet* or *Faust* or the *Idyls* of Theocritus. But if such a man says, or if his students say, that for the great mass of young people these things are intrinsically more interesting, then I have only to answer that, in the nature of things, that which is of the greatest and most permanent concern to the average man must be the character, behavior, and accomplishments of the most highly developed and richly equipped of this world's products, namely, mankind—the object of humanistic studies. Pope allowed himself a poet's overstatement when he wrote "the proper study of mankind is man." But what he meant was substantially true. All those studies, then, that enable us to understand the mind and heart of man will be of interest to men in a non-technical education. Among such subjects is obviously history; and, happily for us, while the materializing tendency of our wonderful outward civilization has attacked everything else that deals with the past, it has, nevertheless, with salutary inconsistency, not felt that we could completely understand the America of today by beginning with the Philippine War, or with the Civil War, or with the War of 1812,

or with the Declaration of Independence, or even with the Landing of Columbus. Not a whit wiser is it to suppose that the study of *any* phase of human activity can begin with that which today is. The present can be seen justly only in the setting of the record of the race; and there is no record more authentic—no record so intimate and so vital—as literature. The study of this constitutes the gentler discipline, in which the tastes of many are likely to meet. Secondary to it, but only secondary, is the study of the workings of the human mind as seen in logic, and in the expression of thought in words, or, in the terms of the schools, in rhetoric and grammar; and hardly secondary, even, is the record of the appreciations and visions of the human mind, as seen in art.

I have for the moment dealt with the question of the value of humanistic studies by referring to the intrinsic interest of such studies. I come now to another point of view, and, at the same time, to a perversion of judgment from which we, in this country and this age, are especially liable to suffer. It is said, and said too often without prompt contradiction, that the study of mathematics and of the natural sciences is practical, is useful, while the study of literatures, of systems of speech, of art, is ornamental, having nothing to do with getting on in the world. Let us look more narrowly at this assertion. An admirable, and, to my mind, an indispensable training is given through the mathematics of the school or the college. But, unless we are to be engineers or surveyors, what are we to do later with our higher algebra, our solid geometry, our trigonometry, our conic sections? The simple fact is that the mathematics of daily life consists of addition, subtraction, multiplication, and division, with perhaps a little cancellation—in short, the mathematics, not of the college, nor yet of the high school, but of the grammar school. So, too, we get interesting and valuable knowledge, knowledge of which every student should have some share, in the study of physics and chemistry. But unless we are going to be mechanics or manufacturing chemists, upon what is our knowledge of physics or chemistry going to be brought to bear in

daily life? I know, as well as the physicist, that the falling mass will crush me, and I get out of the way, though I no longer remember how to calculate its striking power. My fire warms me as it warms my friend, the chemist, though I have forgotten, thirty years ago, precisely how the invisible gases behave in combustion; and that fire would warm me, even if I had never known. I can use the telephone as well as another, though I couldn't possibly make one or even repair one. I travel by cars as well as any professor of mechanical engineering, though such a professor could probably run the engine, while I should need a little preliminary training. And when I say "I," I might as well say "you," or people in general who do not devote themselves to the technical work of life. The average untechnical man in the world, whatever he is finally to do, is distinctly the gainer by the study of mathematics and the study of chemistry and physics, and he *may* find in those subjects that which will prove to be the very food of his natural individual appetite. But the claim that he will find mathematics, physics, and chemistry of *practical* use to him in daily life, is baseless. For the average untechnical man, the practical things are far more subtle than these. Putting aside, as necessary to acquire, no matter what one studies, the mechanics of the mind, namely, the power of accurate observation and accurate reasoning from that which is observed, the things which will help a man to get on in the world, outside of the manufactory and the patent office, are: a knowledge of and ready sympathy with men; quickness and flexibility of mind; and the power of expressing himself accurately and forcibly. A student of the course of electrical engineering in Cornell University, a man of excellent ability, said to me at his graduation, that, while he had got from his scientific studies the means of making an immediate living, yet many of the men in the courses in arts and philosophy, who had entered at the same time with himself, had outstripped him in ways that he could apprehend—had grown away from him—and that, to just this extent, he felt handicapped in the race of life. That was a dim recognition of the practical value of the so-called unpractical studies, even in the case of a man

who will mostly have to vie with men no more liberally educated than himself.

In all that I have thus far said, I have used the word "science" as covering the natural sciences, in distinction from the humanities. This is the commonly accepted meaning of the word in this country. It is often pointed out that the usage is an unfortunate one. I wish to point this out again today, and then to call attention to certain things that follow from a juster conception.

Webster defines science as "knowledge duly arranged, and referred to general truths and principles on which it is founded, and from which it is derived." I should like myself to define it, more simply, as *ordered knowledge*. Briefly, we may say that science deals with facts, and the reasons for those facts; or, more briefly still, with facts and principles. No narrower definition would anywhere be accepted, or, indeed, is anywhere accepted. But it is obvious that this is too broad a definition to be limited to the range of the natural sciences. Wherever there are facts, there may be a recording of those facts, and an attempt to understand their relations. Political economy, then, though it deals with the behavior of man within a certain field, and not with nature outside of man, is a science. Sociology, which likewise deals with the behavior of man within a certain field, aims to construct a science. History, which deals with the facts of man's experience within limits hard to fix, is a science. Comparative philology, which deals with the forms or the syntax of several languages, and attempts to detect the operation of principles through which they have come to be what they are, is a science. The study of the history of a literature, if it aims to trace the development of that literature, and the principles that have governed the development, is a scientific study. So is the study of Greek philosophy, or of Greek art. So is the study of Roman law, or of Roman administration. Furthermore, it is obvious that the aims and methods which I have indicated are the aims and methods which have long governed all humanistic study whatsoever, so far as the things studied

can possibly fall within the reach of scientific method. The *American Journal of Philology* is as much a scientific journal as is the journal that bears the name *Science*. Moreover, the spirit of man, with whose behavior the humanities deal, is in reality just as much a part of nature as is his body, or as are chemical reagents, or the forces which physics measures. Strictly and fairly, then, every study that deals with the recording and explaining of facts is a branch of natural science. Long-established usage, however, is hard to overthrow. The unhappy antithesis which the philosophers have, for over two thousand years, been setting up between man and what they called nature has so controlled nomenclature that we must accept the meaning now attaching to the latter word, and must be content, therefore, to divide the body of science into two parts: the humanistic sciences and the natural sciences.

Let us utilize the distinction by pointing out certain facts and drawing certain inferences.

First: In the ordinary conduct of human life, whether in our business or in our other relations with the world, we are governed by considerations which do not admit of an absolutely certain correctness of decision. We see reasons on both sides. Perhaps they appear to be evenly balanced. Perhaps they seem a little stronger, perhaps they seem a good deal stronger, on the one side than on the other. In every case, however, where any question at all arises, it is by probabilities that we are governed. Nor can we solve our problems by applying the actual test of experience before taking our step; for it is only the actual taking of a step, one way or the other, that provides us with experience.

Now the process by which the student of the humanistic sciences arrives at conclusions is of a precisely similar nature. In endeavoring to discover the reasons for facts which he has recorded, or which others before him have recorded, say in French syntax, or in Latin syntax, he has first to divine a line of proof. Often, after grasping clearly the nature of his problem, he is sorely baffled to see along what path to

look for evidence—to divine what phenomena would *afford* evidence. And, when he has seen this, and reached his evidence, it is generally not of a one-sided kind. He has to balance indication against indication, and thread his way through complicated considerations to an ultimate probability, great or slight. Nor is this true of the more advanced questions only, with which the graduate student may come to occupy himself. It is true, in substance, of all the work in the humanistic studies ordinarily done in the classroom of college or school. The schoolboy who is working out the meaning of a page of Greek or Latin for tomorrow's lesson, if he has been rightly trained, is working in the same way. In trying to see what his author means, he is going through a process of repeated balancing of considerations. A given word has, in most cases, a number of possible meanings. How can he tell which meaning his author had in mind in speaking or writing that word? A given case, a given mood, may have two or three or a dozen differing forces. Which force did his author mean in this particular case? In order to decide, the student must look for all the possible evidence on the page before him, and then balance the various possibilities in the light of this evidence. The process of learning to read Greek or Latin is, indeed, when properly taught, a process of acquiring the power of rapidly feeling possibilities, and of rapidly weighing them.

The processes of the study of the natural sciences, on the other hand, are, in a large degree, of a different kind. Some of the great inductions of science, to be sure, have been reached by procedure of a similar character. The theory of evolution, for instance, has never been proved by absolute evidence, nor, in all probability, does it admit of absolute proof or disproof. The atomic theory, the glacial theory, rest on the balancing of evidence, and belong accordingly to the same class with the larger generalizations of political economy, of history, of linguistics. But the ordinary work in natural science, as performed in our schools and colleges, proceeds in a large degree by definite and incontrovertible tests. The very merits claimed for it, as against the classical training, by such men as the late Presi-

dent Francis A. Walker, of the Massachusetts Institute of Technology, lie in the fact that its results do admit of definite tests. A hypothesis is laid down. An experiment is then performed, which, if rightly devised, will absolutely settle the question one way or the other, or, if it does not go so far, will at least completely eliminate one conceivable explanation; after which, other experiments will follow, until an absolute result is finally reached. This is admirable, and no complete education, in my opinion, can afford to dispense with it. But it is not the sort of thing that one has to do in practical life, and it therefore does not directly prepare one for that life. It is, in a word, a less *practical* training, for the average man, than the training given by political economy or Greek. If you must be guided by practical considerations in the choice of studies, then, unless you are going into technical work, the methods of humanistic science will serve you better in daily practical after-life than the methods of natural science. And, of all humanistic sciences that can have their place in the curriculum of the schools, the science that is brought to bear in the reading of Latin and Greek is the most effective, because, it demands, in a higher degree and with a greater constancy than any other, delicate and exact observation, and the rapid weighing of large ranges of possibilities.

I come now to the fifth possible acquisition to be gained from education. I remarked, a few minutes ago, that the aims and methods of all studies have long been scientific, *so far as the things studied could possibly fall within the reach of scientific method*. This reservation is of the gravest importance, and is fraught with far-reaching consequences, the moment one comes to weigh the question of educational values. For there is, in human life, a great field with which science has nothing to do, and can have nothing to do; and to this field a large part of certain humanistic studies belongs. The student who is reading the *Persians* of Aeschylus proceeds by a scientific method—largely unconsciously by this time, if he has been rightly trained—to find out what his author says. But the *effect* upon him of that which his author says is something of a wholly different kind



from any recognition of scientific fact. It is the incalculable effect produced by noble passion and perfect expression. It is precisely this incalculable element that constitutes the supreme virtue of the study of literature and art—not *because* it is incalculable, but because it belongs to the finest issues of human life. It has no counterpart in science. It is not a matter of the recognition of law. It is a matter of spiritual and aesthetic perception. It cannot be defined. You cannot put it under the microscope. People have tried so to seize and study it, but never with success. Arnold rightly says: "The mark and accent of beauty, worth, and power in poetry of a high quality cannot be defined." And the same is true of prose, the moment it goes beyond the stage of being a mere vehicle of communication. Literature, then, has something to offer, real but unmeasurable, which science has not—nay, which even history has not in the same degree; for Aristotle's observation, quoted by Arnold in the same paper, is profoundly just, that the superiority of poetry over history consists in its possessing a higher truth and a higher seriousness. Now it is not the man of letters alone that recognizes that literature has something to give which is not included in the realm of science. Among the few masters whom we all venerate is Darwin. Darwin's scientific sense and power are not to be impeached. They grew with him to his latest years; but poetry, which had once formed some part of his mental life, became, as he himself tells us, less and less intelligible to him. Many men might say the same thing with contempt. Darwin was too good a man of science to do this, for he recognized that the love of noble literature is an actually existing fact, and a means of great and high pleasure. Shall I say that the most serious difficulty in the way of sound and just judgments in the matter of educational values lies today in the fact that many men of the natural sciences, and not a few men of the humanistic sciences, fail to recognize that which the great master saw? The scientific sense, as such, has nothing to do with these matters, and possesses no perception for them, whether that scientific sense belong to a chemist, a biologist, a political economist, or a Latinist. This is the main reason

for the failure to recognize the value of literary studies, and the consequent tone of superiority to such studies, too frequently betrayed by the man of science. There are most able and excellent persons, business men, doctors, lawyers, professors, who are without the sense for literature, just as there are most able and excellent men who are without the sense for music. A second reason is our unhappy modern narrowing of the student's preliminary training, in consequence of which many a man who possessed the latent sense for literature failed to have it developed, or even to know of its existence, because his training, at least beyond the rudimentary stage, had been in science only. My own sympathy is deep on both sides. I know no reason why the satisfactions of the scientific sense should be left out of any man's life; I largely, in my own field, live in them. But I also know no reason why the satisfactions of the imagination and the love of perfect literary form should be left out of any man's life; I could not live happily without them. The tendency of our extremists in education is to narrow the intellectual life. Narrowness is better than dissipation, but there is something between these two vicious extremes. Education need not be a failure if, instead of aiming at unfolding one of the two capacities of the human intellect, it aims at unfolding both.

We have now recognized the distinctive character of certain humanistic studies, and are ready to consider what might look at first blush to be a severe test of the value of those studies. The university which today represents the extreme of modern educational theory, as I have already said, is the Leland Stanford University. In an article on "The Educational Ideas of Leland Stanford," published by President Jordan in the *Educational Review*, September, 1893, there are two succinct statements of the purposes of the University. One is in the words of the president: "The whole gift is devoted to education pure and simple, without any hampering clause, and with no other end in view than, through the extension of knowledge, to help humanity." With regard to this pronunciamento, I have only to remark that, if Mr. Stanford had no other end in view than the

extension of knowledge, no matter how well ordered it might be, then he meant to leave a large and precious part of the intellectual life unprovided for. I somewhat fear that the condition of things at the university which he founded must for some time be largely that which President Jordan's formulation of its purposes portends. But the founder himself, whether consciously or unconsciously, enunciated a larger aim, in words quoted in the same article. It is by these words that I am willing that the claim of the value of the humanistic studies should be weighed. They are as follows: "I would have this institution help to fit men and women for usefulness in this life, by increasing their individual power of production, and by making them good company for themselves and others." The statement is full of homely sense. It was clear to Mr. Stanford's practical mind that even the getting of a living does not fill the full field of the word "practical." The aim of our labor is undoubtedly to acquire that which will make life desirable, to increase the rewards of life—the *praemia vitae*. But Mr. Stanford saw that the pleasures of food, of warmth, of a well-cushioned chair, of convenient methods of locomotion, were not the only *praemia vitae*. He would train us so that we should be good company for ourselves and others. Well, then, if I am to be good company for myself, who forbids me to be so trained that I may understand, and, understanding, may watch with keen interest, the working of the *Zeitgeist* of this century, as it shows itself in the ways and temper of these United States, of this Canada, and even of England, of Germany, of France, of Italy, of Spain? Who forbids my finding pleasure in studying the ways and temper of the peoples who, a century ago, were shaping our present civilization for us? Who forbids me the keenest pleasure in the ways of the rich life and thought of Athens, of Alexandria, of Rome, which, two thousand years ago, were helping to make our present life? Who forbids me to enjoy reading my novelist, my poet, my philosopher, against a background of a large and varied experience of life—gained in part by travel, if possible, but in immensely greater part through the records which life has left in history, literature,

and art? In the case of another man, you certainly have not told me all I wish to know, when you inform me that he is able to make ten thousand a year, or fifty thousand, or even some unmentionable larger sum. I still desire to know what he practically gets out of life; what his pleasures are; how much of human activity is a sealed book to him. When he has done his day's work, does he find anything that belongs to him in the books which the world holds precious? If he lives where it is possible to see something of art, does he know good painting and good sculpture, and feel their charm? Would he, to apply Mr. Stanford's further test, be good company for *me*? Is he an interesting person, whose way of looking at things I should like to know? Does he understand what one means by "the intellectual life"? Is he a money-maker alone, or a fine intelligence? Life is not a system of manufactures, except for those who have to spend themselves in making our garments, grinding our flour, and planning and building our engines. It is a sum total of the working of subtle forces—a sum total made good and desirable by the untechnical things, first, of course, honorable living, and, on a plane lower than that alone, breadth of interests and sympathies, backgrounds, outlooks, intellectual tastes, appreciation—all those things which belong to the content of the much-abused but essentially sound word *culture*, the bringing of oneself to the best that one can be. It was because of the value of the falsely called unpractical things that Mr. James Russell Lowell, himself a great exemplar of a liberal education, said, when President Walker asked the faculty of Harvard College, many years ago, what their notion of a university was, "A university is a place where nothing useful is taught." As he explained in his *Harvard Oration* of 1886, he did not mean that students were to be tied to this or that, or that any subject should be denied them, to which a strong natural bent might lead; but that the day should never come when the weightier matters of a language, namely, such parts of it as have overcome death by reason of the beauty in which they are incarnated, such parts as are universal by reason of their civilizing properties, their

power to elevate and fortify the mind, should cease to be predominant in the teaching given at the university. "Let the humanities," said he, "be maintained undiminished in their ancient rights. Leave in their traditional pre-eminence those studies that are rightly called liberal; those studies that kindle the imagination, and through it irradiate the reason; those studies that manumitted the modern mind; those in which the brains of finest temper have found alike their stimulus and their repose, taught by them that the power of intellect is heightened in proportion as it is made gracious by measure and symmetry."

Let me now sum up, in a spirit of moderation, but without disguise, the claims which I have made, and in consequence of which I believe that, in the advance of education, there is no danger that humanistic studies will pass permanently into a secondary place. It has been seen that a young man or young woman, natural capacity being granted, may acquire five things in a college course: discipline; power of expression; information; outlook; the sense of the noble and beautiful in literature. The first acquisition, the training of the mind to accurate action, I have maintained, may be had from humanistic studies, and have conceded that it may be had from scientific studies. My own view is that both kinds of discipline, for different reasons, are necessary, and that something of both should therefore be prescribed in that part of education which serves as the foundation for specialized elective work. The second acquisition, the power of expression, is obviously, as has been said, to be had in larger degree from humanistic studies, and in smaller degree from scientific. As regards the fourth acquisition—to pass the third for the moment—I am entirely willing to make a concession, which, however, is rather apparent than real. The outlook which a man should have upon life is certainly incomplete unless he has learned to see nature from something like the point of view of modern science. But, in the first place, I have asserted that the study of natural science should form a part of every education, and I will gladly add that it ought to begin in childhood. And, in the second place,

it is clear upon an instant's thought that no man who devotes any part of his time to reading is in danger of passing through life untouched by the spirit of this study. Our newspapers, our monthly magazines, are full of it; while one would not get far, even if these were safer guides than they are, by trusting to them for his conception of *ancient* life and thought.

With regard to the third acquisition, that of the information one carries away from college, a point is often scored, with supposed telling effect, against humanistic studies, and especially against the study of the classics. It is said that a man forgets even how to read his Greek and Latin. Undoubtedly he often does, sometimes, perhaps, for the reason that he has never learned. But what an unthinking world it is! I would challenge any ordinary professional man who has been out of college for fifteen years to deduce the formula for the parabola or the ellipse. Much rather, I fancy, would a man attempt to read again some once familiar page of Horace; and, badly as he might fare in trying to get the meaning out of a page of Cicero at sight, he would in most cases come off better than if he attempted to solve at sight a problem in spherical trigonometry. In point of fact, the information gained from humanistic studies does not suffer by comparison with any other in respect of its subsequent fate. But the greater fact is that what one carries away and really keeps, outside of mental habits and the power of expression, that which lasts longest of all is not information at all, but the fourth and fifth items of our count—outlooks, horizons, backgrounds, appreciation—the power, to use Arnold's words about Sophocles, "to see life steadily, and see it whole." This has its immense value for the man himself—for his mental sanity, and his enjoyment of life; and it has its immense value for the man in his relation to his fellow-workers.

I infer, then, that when one comes to count the sums total of acquisition conferred respectively by the humanistic and the scientific training—discipline, power of expression, information, outlook, appreciation—the advantage, for the average untechnical man, lies with the former.

Is this a solution in the air? Have we been spending an idle hour in dreams? What are the facts of experience? Here, then, we are driven back, in spite of our protest, to the test of fact. But let us trust our impressions in the large, rather than our memory of this or that man. What is it that gives the lawyer, the physician, the politician, the man of business his power of carrying others in the direction in which he wishes them to go? What makes the leader? Undoubtedly in part his skill and special knowledge in that particular thing which he has elected to do. What next? We are pitted against one another in business and professional life, and in social life. Temperament will tell, and physique will tell. But what comes next after these is not a knowledge of physics and chemistry, of astronomy, of biology. If facts are wanted, the facts of history, of literature, and of art will go farther in the life of the untechnical man than the facts with regard to the processes which fill the air of our cities with the smoke of manufactures. A knowledge of the constitution of Athens under Solon, remote as it is, is as likely to come *à propos* as is a knowledge of the constitution of molecules. But the most practical thing of all—to say it for the last time—is none of these. It is the power of seeing rightly, and in its broader relations, what other men see less rightly and more narrowly, and of so expressing oneself that they shall see it. It is the power of thought and feeling. This is obvious enough in the ordinary life of a community, but it is startlingly obvious in the great crises of national life. The two most potent forces which this generation of Americans has seen, the forces which, more powerfully than any others, have determined the courses of human life in remote places and for remote times, have been, not the steam engine and the electric circuit, but love of country and hatred of the oppression of man by man—sentiments quite as likely to be fostered in the young student's breast by the *Persians* of Aeschylus or the Epic of Virgil as by Puckle's *Conic Sections* or Williams' *Chemistry*.

And yet—let me say once more—you must not mistake me. I believe in conic sections and in chemistry as de-

voutly as I do in Greek and Latin, and, wherever any man says they shall not be taught in universities with the utmost freedom, and on terms of perfect equality with the inherited curriculum, I am with the mathematician and the chemist and against him. But my reason is, not the unthinking claim that a knowledge of these things can be brought to bear in the daily life of a professional man or a business man, while a knowledge of history, of literature, or of art cannot, but that the human mind has a right to whatever its natural tastes and aptitudes demand. Let us have industrial schools for workmen—Heaven knows that we need them; let us have technical schools to train up directors of great works and possible inventors; and let us have the liberal education, with great range of individual choice, for the other careers. Let us grant with all our hearts that, in the dye-factory, a knowledge of chemistry is practical and a knowledge of Greek unpractical; but let us not delude ourselves, or suffer others to delude us, with the popular fallacy that the same thing holds in the office of the lawyer, the doctor, the editor, or the business man. Let us not turn from the worship of a college fetich to bow down before a fetich of the market-place. Let us not believe that the day is coming when man is to be defined as a manufacturing animal, and the leading university is to be the one in which, in popular phraseology, nothing useless is taught.